

REMARKS/ARGUMENTS

After the foregoing Amendment, Claims 1-27 are currently pending in this application. All claims have been amended to remove the reference numbers. Claims 1, 19 and 26 have been amended to more distinctly claim subject matter which the Applicants regard as the invention.

Claim Objections

The Examiner objected to claims 8 – 10 for being of improper dependent form for failing to further limit the subject matter of previous claim 7. Claims 8-10 have been amended and the withdrawal of the objection to the claims 8 – 10 is respectfully requested

Claim Rejections - 35 USC §102

Claims 1 – 7 and 11 - 27 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,100,941 to Dimitrova et al. (hereinafter "Dimitrova").

The present invention is directed to an apparatus to provide a user with a summary of a multimedia video stream, so that the user can browse the multimedia stream easily and/or decide which sequences to view in their entirety. (Abstract and page 2, lines 20-25). As stated in claims 1, 19 and 26, the present invention

identifies key elements of video, audio and text information which may be included in the summary. These elements are filtered in a three-stage process, so that the key elements that will be presented to the user are identified. The three stage filtering process is stated in claims 1, 19 and 26. The three-stage filtering enables the presentation of a summary which is in the most useful form for the user.

The specification discloses examples of low, medium and high level features which make up the key elements for each of the video, audio and text categories (page 12, line 18 to page 13, line 19). The selection of the features is disclosed in detail (page 16, line 17 to page 17, line 14). For example, the key elements may include faces (page 16, lines 25-28), speech (page 17, lines 6-9), a name or important keyword (page 17, lines 10-11). They may also include a family histogram (page 17, lines 12-14 and page 13, line 28 to page 14, line 16). These key elements all help to identify segments of the multimedia stream which are to be included in the summary for the user.

This is unlike Dimitrova. Dimitrova discloses a method that accomplishes a much simpler task than the present invention. Dimitrova is merely concerned with removing commercials from a TV program. The "key elements" which Dimitrova detects are all low level features, characteristic of commercial breaks in TV programs. Dimitrova is looking at such items as the rate at which cuts occur, and the presence or absence of a logo or brand name (Abstract).

Dimitrova discloses various filtering processes in order to detect these low-level features (column 5, line 20 (filter thread 84); column 5, lines 53-55 and 66-67; column 6, line 40; column 15, lines 39-52). However, the filtering disclosed by Dimitrova, unlike the filtering stated in claims 1, 19 and 26, all form part of the commercial identification process. The filtering does not take place after the commercial has been identified.

Dimitrova discloses that a user can input a confidence level as to whether the low-level features indicate a commercial (column 15, lines 52-61). However, this is still part of the process for identifying a commercial and does not take place after the commercial has been identified.

Dimitrova does not disclose putting these low level features together into a summary for presentation to the user. In fact, Dimitrova teaches away from presenting a summary for the user, as the goal of Dimitrova is to automatically skip the commercial breaks when they have been identified from these low level features.

While the Examiner has rejected claim 1 based on Dimitrova, it is evident that the Examiner has had difficulty reading the individual features of claim 1 onto Dimitrova. The Examiner has not provided a specific one-to-one analysis of the features of Dimitrova which allegedly anticipate each feature of claims 1, 19 and 26. Rather, for each claim feature, there is only a blanket assertion that the feature is

found somewhere between column 2, line 10 and column 3, line 59 of the Dimitrova disclosure.

One reason for the Examiner's lack of specificity may be that many of the features of claims 1, 19 and 26 are not present in Dimitrova. The goal of Dimitrova is different than that of the present invention. Dimitrova is not concerned with producing a summary of the multimedia stream comprising key elements that are identified and filtered from the input stream as stated in claims 1, 19 and 26. Dimitrova does not need, nor does Dimitrova have, the three separate stages of filtering as stated in claims 1, 19 and 26. Dimitrova does not identify key elements of video, audio and text for potential inclusion in the summary, also as stated in claims 1, 19 and 26.

The objective of Dimitrova is to identify portions of the video stream to reject because they contain commercials. While Dimitrova discloses various filtering processes, Dimitrova does not disclose the filtering of claims 1, 19 and 26. Unlike the present invention, the filtering of Dimitrova is part of the process for identifying a commercial. Thus, Dimitrova has no three-stage filtering of the portions of the video after the portions have been identified. Dimitrova simply rejects the identified portions. Dimitrova does not disclose that the identified portions are limited by the three stage process, as claimed. Dimitrova would not disclose the limiting of identified portions, as Dimitrova is not concerned with using the

identified portions. While Dimitrova discards the entire identified portion, the present invention selects particular portions to display to the user as a useful, meaningful summary of the input video stream. Therefore, Dimitrova does not disclose all the features of claims 1, 19 and 26 and the rejection must be withdrawn.

Claims 2-18, 20-25 and 27 all are dependent upon allowable independent claims, either directly or indirectly. Therefore, Applicants believe that all claims are allowable over the cited prior art of record for the same reasons provided above. Based on the arguments presented above, withdrawal of all rejections of all claims is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

Applicant: Agnihotri et al.
Application No.: 10/562,538

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1 – 27, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

Agnihotri et al.

By 

Matthew I. Cohen

Registration No. 48,133

Volpe and Koenig, P.C.
United Plaza
30 South 17th Street
Philadelphia, PA 19103-4009
Telephone: (215) 568-6400
Facsimile: (215) 568-6499

MIC/pp